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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/658,204	09/08/2000	Charles A. Eldering	T723-00	3450

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EXPANSE NETWORKS, INC.
6206 KELLERS CHURCH ROAD
PIPERSVILLE, PA 18947

EXAMINER

RAMAN, USHA

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/658,204

Applicant(s)

ELDERING, CHARLES A.

Examiner

Usha Raman

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2000.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-49 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
2. Claim 1-4, 9-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view Hendricks et al. (US Pre Grant Pub. 2003/0145323).

In regards to claim 1, applicant's admitted prior art discloses the use of EPGS with inserted advertisements was well known in the art. However, the drawback of such a system, as stated, is that the same advertisements are displayed to all the subscribers, thus presenting to vast majority of the subscribers with advertisements that they may not be interested in.

Hendricks discloses a system of presenting targeted advertisements for television viewers based on viewer characterization or demographics and attempts to deliver advertisements that might best suit a viewer or group of viewers with common interests. Hendricks comprises an advertisement characterization module (287), a subscriber characterization module (285) and a correlation module (274) and correlates them and assigns targeted advertisement to individual or groups of subscribers. Note paragraph 204 in page 15 and paragraph 207 in page 16. Hendricks states that the motivation for

targeting advertisements is for advertisers to optimize their advertising expenditures by airing their advertisements to individuals who are most likely to buy the advertised product. Note paragraph 15 in page 1 and paragraph 21 in page 2 and paragraphs 464 and 465 in page 39.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the prior art system by inserting targeted advertisements into the EPG, with the all details and methods of presenting targeted advertisements specifically taught by Hendricks. The motivation would be for advertisers to reach a group of audience that are most likely to buy their products.

In regards to claim 2, the modified prior art system in view of Hendricks, discloses that the advertisements are transmitted to television terminals (the subscriber interface) at subscriber premises. Note paragraph 17 in page 2 of Hendricks.

In regards to claim 3, in the prior system modified in view of Hendricks, the television terminal can be a set top box. Note paragraph 91 in page 5 in Hendricks.

In regards to claim 4, the modified prior art system in view of Hendricks discloses that the television terminal may be incorporated into circuitry of the television itself, and further states that individual television terminals have a television terminal address that allow for them to be uniquely identified by an operation center. Note paragraph 91 in page 5 and paragraph 25 in page 2.

In regards to claim 9, the modified prior art system in view of Hendricks discloses that a computer assisted packing system of the operations center receives data relating to the viewer information based on demographics and program viewed from databases. Note paragraph 138 in page 10 in Hendricks.

In regards to claims 10, modified prior art system in view of Hendricks only discloses that "separate" databases are maintained containing viewer demographics, however does not explicitly disclose whether the databases are located externally to the system. Official notice is taken that it is well known to use databases that are internal or external to a system. It would have been obvious to one of ordinary skill to use a database located externally in order to reduce amount of memory and storage space in the advertisement management system.

In regards to claims 11, modified prior art system in view of Hendricks only discloses that "separate" databases are maintained containing viewer demographics, however does not explicitly disclose whether the databases are located internally or externally to the system. Official notice is taken that it is well known to use databases that are internal to a system. It would have been obvious to use a database located internally to the advertisement management system in order to minimize latency.

In regards to claim 12, the modified prior art system in view of Hendricks discloses that location information as well as demographics (such as income) information can be used to target advertisements. A real-estate information can

be characterized by geographic location and therefore the customer characterization of Hendricks includes a real-estate information. Note paragraph 26 in page 2 and paragraph 232 in page 19.

In regards to claim 13, the modified prior art system in view of Hendricks discloses that the advertisements are characterized by vectors containing a probabilistic distribution value for different target markets (plurality of categories). Note table H and description in paragraphs 325-326 in page 20 of Hendricks.

In regards to claim 14, the modified prior art system of Hendricks discloses that the advertisement vectors include a plurality of targeting categories (such as area of dominant influence). Note paragraph 26 in page 2 and table H and paragraphs 325-326 in page 20 of Hendricks.

In regards to claim 15, the modified prior art system in view of Hendricks discloses that weighting schemes can be introduced for certain targeting factors. Note paragraph 266 in page 22 and paragraph 463 in page 39 of Hendricks.

In regards to claim 16, the modified prior art system in view of Hendricks does not disclose using weighted average of the categories for the advertisement vectors. The modified system however discloses that advertisements are characterized by vectors containing a probabilistic distribution value. As an example, Hendricks shows that a sum of squares algorithm can be used for correlating the different groups (vectors) and prioritizing the groups accordingly for the targeted advertisements. Note paragraphs 461-464 in page 39 of Hendricks. Official notice is taken that weighted average and sum of squares are

well known statistical models used for estimating probability of a particular event. Therefore it would have been obvious to one of ordinary skill to use a weighted average of the categories for prioritizing the advertisement vectors due to the simplistic nature of the weighted average model.

In regards to claim 17, the modified prior art system in view of Hendricks discloses that subscribers are grouped into a plurality of groups characterized by common subscriber characteristics (target criteria) and receives particular targeted advertisements for that group. Note paragraph 26 in page 2 of Hendricks. Therefore it would have been obvious to send a group of viewers, EPG with targeted advertisements that correspond to demographic factors of that group.

In regards to claims 18, 19, and 20, the modified prior art system in view of Hendricks discloses that the operations center sells airtime to advertisers and determines a pricing scheme to be presented to one or more advertisers for placement of advertisement based on correlation results. Note paragraphs 151-161 in page 11 of Hendricks.

In regards to claim 21, the modified prior art system in view of Hendricks does not disclose that the prices charged by the advertisement sales module are directly proportional to the correlation results. However Hendricks' correlation results determines the airtime of an advertisement as well as the frequency of that advertisement to optimize the number of viewers tuned to an advertisement at a given time. Official notice is taken that broadcaster charges an advertiser

amount proportional to the number of audience it reaches. An increased number of viewers are likely to generate an increased revenue for the advertisers from sales due to advertising their products to a group of interested viewers.

Therefore it would have been obvious for the advertisement sales module to charge an advertiser proportional to the correlation results.

3. Claims 5-8 and 22-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Hendricks (US Pre Grant Pub. 2003/0145323) as applied to claim 2 above, and further in view of Macrae (US Pre Grant Pub. 20030208756).

In regards to claims 5, 22, and 37, as discussed in claim 1, above, the modified prior art system in view of Hendricks has an advertisement characterization module, a subscriber characterization module, and a correlation module that inserts targeted advertisements in EPG.

The modified prior art system lacks an EPG download server that creates a plurality of EPG screens having different targeted advertisements.

Macrae teaches an example of presenting advertisements inserts in program guide screens that are made of "hard pages". Macrae, as an example, discloses that a "hard page" can be defined by a different sort category. For example, a "hard page" of the sports category would have different panel ads from the hard page of the children's category. Note paragraphs 218-219 in page 12 and paragraph 281 in page 15 of Macrae.

It would have been obvious to further modify the prior art system with Macrae's teachings so that when a program guide is transmitted to a subscriber premises, different panel ads corresponding to various categories are inserted in the different "hard pages" of a program guide, so that a user receives advertisements related to the category of the program guide they are tuned to. The motivation for such a modification would be to provide targeted advertisements to a viewer based on viewer interests as well as the current category of program guide they are tuned to. For example, a viewer whose profile indicates interest in sports as well as children's programs will receive sports-related advertisements when selecting the sports category hard page.

In regards to claims 6, 7, 24 and 39, the modified prior art system in view of Hendricks discloses that a multiple feeder channels carrying alternative targeted advertisement are carried and the set top terminal based on a priority algorithm (correlation results) can decide which targeting category to switch to. Note paragraph 212 in page 16 of Hendricks. Therefore it would have been obvious to modify the system to send the plurality of program guide screens with customized ads on the different multiple feeder channels and have the set top terminal decide which program guide screen with the appropriate targeted advertisement to switch to.

In regards to claims 8, 23 and 38, modified prior art system in view of Hendricks and Macrae discloses that alternatively the feeder channels can be assigned to different groups by a break management engine in the advertisement

assignment module, in which case, the advertisement management system determines which EPG screen with inserted advertisements should be sent to the different groups. Note paragraph 212 in page 16 in Hendricks.

In regards to claim 25, the modified prior art system in view of Hendricks discloses that the television terminal can be a set top box. Note paragraph 91 in page 5 in Hendricks.

In regards to claim 26, the modified prior art system in view of Hendricks discloses that the television terminal may be a satellite receiver or incorporated into circuitry of the television itself, and further states that individual television terminals have a television terminal address that allow for them to be uniquely identified by an operation center. Note paragraph 91 in page 5 and paragraph 25 in page 2 in Hendricks.

In regards to claim 27, the modified prior art system in view of Hendricks discloses that a computer assisted packing system of the operations center receives data relating to the viewer information based on demographics and program viewed from databases. Note paragraph 138 in page 10 in Hendricks.

Claims 28-36 correspond to claims 12-21 above and have been analyzed as above.

In regards to claim 40, as discussed above in claim 39, since the set top terminal decides which targeting category to switch to based on priority algorithm, the instructions are based on correlation results.

In regards to claim 41, as discussed above in claims 1 and 37, the modified system has advertisements inserted in the EPG have an advertisement characterization module and a correlation module matches the subscriber characterizations and the advertisement characterizations.

Claims 42-49 correspond to claims 13-21 above and have been analyzed as above.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usha Raman whose telephone number is (703) 305-0376. The examiner can normally be reached on Mon-Fri: 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on (703) 305-4380. The fax phone number for the organization where this application or proceeding is assigned is 703-308-5359.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Vivek Srivastava', is positioned above the printed name and title.

VIVEK SRIVASTAVA
PRIMARY EXAMINER